

REMARKS/ARGUMENTS

In response to the above-identified Office Action, Applicant has canceled claims 19 and 21 and amended claims 1, 10, 20, and 22. Accordingly, claims 1-18, 20, and 22-26 remain pending in the present application.

For the reasons set forth more fully below, Applicant respectfully submits that the present claims are allowable. Consequently, reconsideration, allowance and passage to issue of the present application are respectfully requested.

The Examiner rejected claims 1-18 under 35 U.S.C. 103(a) as being unpatentable over Kim et al in view of Eddy et al and rejected claims 19-26 under 35 U.S.C. 102(b) as being anticipated by Kim et al. Applicant respectfully disagrees with the rejections.

The present invention provides aspects of a fail safe circuit for protecting power supply operation from a failure. The fail safe circuit shutdowns at least one power supply when a preset threshold is exceeded and resets to resume normal operation following a temporary fault condition. The fail safe circuit also shuts down the at least one power supply to protect against a fault internal to the fail safe circuit.

Applicant has amended independent claims 1 and 10 to more particularly recite that the at least one power supply is shut down when an internal fault occurs in the fail safe circuit. Support for the amendment is found in the specification on page 4, lines 8-14. Further support for the amendment is found in original dependent claims 5, 13, and 22, which each recite the aspect of the fail safe circuit outputting a shutdown signal when the switch in the fail safe circuit is shorted. Applicant has amended dependent claim 22 to be of independent form and has canceled claims 19 and 21 from which it originally depended. Applicant also has amended claim 20 to depend from amended claim 22,

rather than canceled claim 19. Applicant respectfully submits that no new matter has been added by the amendments nor has the scope of the claims been changed.

Applicant respectfully submits that the cited art of Kim et al (taken with or without Eddy et al) fails to teach, show, or suggest the present invention that includes a fail safe circuit capable of shutting down at least one power supply when an internal fault occurs in the fail safe circuit, as recited in varying form in independent claims 1, 10, and 22. The Kim et al reference describes a power supply circuit that interrupts power to a load in response to a short-circuit or open-circuit condition in the load and restores power after a momentary short-circuit. As the Examiner admits, the Kim et al device is not used in combination with a power backplane in a fail safe arrangement. Thus, Applicant respectfully submits that the potential protection provided by the Kim et al circuit is lost if any component within the circuit fails, which is a deficiency of prior art monitoring circuits that are not fail safe, as described by the Applicant on page 1, lines 13-15. While the Examiner then points to Eddy et al as teaching a backplane for printed circuit boards that uses powered circuit elements arranged in a fail safe configuration, the cited section of Eddy et al merely mentions that "for fail/safe operation, ... construction of the electronic system necessitates the use of redundant I/O modules."

In contrast, as presented hereinabove, Applicant's fail safe circuit shutdowns at least one power supply when a fault condition occurs in the fail safe circuit. Applicant respectfully submits that Kim et al fails to teach or suggest the supplying of a shutdown signal when an internal fault/the shorting of a switch occurs in a fail safe circuit. Further, Applicant respectfully submits that the use of redundant I/O modules as taught by Eddy et al for a fail/safe operation fails to teach or suggest the supplying of a shutdown signal

when an internal fault/the shorting of a switch occurs in a fail safe circuit. Accordingly, Applicant respectfully submits that the cited art, taken singly or in combination, fails to teach, show, or suggest the recited invention of independent claims 1, 10, and 22.

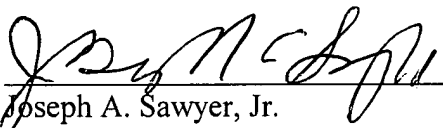
In view of the foregoing, Applicant respectfully submits that independent claims 1, 10, and 22 are allowable over the cited art. Further, claims 2-9, 11-18, 20 and 23-26 depend directly or indirectly on an independent claim, thus incorporating the features of an independent claim while adding further features. Therefore, these claims are respectfully submitted as allowable for at least those reasons presented hereinabove. Accordingly, Applicant respectfully requests withdrawal of the rejections under 35 U.S.C. 102(b) and 103(a).

Applicant's attorney believes that this application is in condition for allowance. Should any unresolved issues remain, Examiner is invited to call Applicant's attorney at the telephone number indicated below.

Respectfully submitted,

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